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ON THE NON-CONTAGIOUSNESS OF YELLOW FEVER.

To the Editor of the Boston Medical and Surgical Journal.

MY DEAR SIR,—With this I send you a paper upon the subject of yellow fever, written by my venerable friend, Dr. John Redman Coxe, of Philadelphia, to Dr. Chervin, of Paris, so long ago as the year 1821, but, for some reason unknown to me, never sent to him. It will be recollected that Dr. Chervin travelled, many years ago, in the West Indies, America, &c., for the purpose of obtaining information on the yellow fever; his object being to prove its non-contagious nature. While in Philadelphia in 1821, he addressed a note to Dr. Coxe on the subject, which called forth this reply. During the last season Dr. Coxe made a six months' sojourn in Europe, in which he visited England, France, Holland, Germany, Prussia, Switzerland, &c., "seeing much," as he observes, "and wondering at the changes which fifty years (since my last trip) had produced, all ending, however, in thanking God that I was an American, and returning more fully convinced of the happiness of our country, its government and institutions, than ever, and regretting that we seem among ourselves to be ignorant of the superiority we actually sustain above the rest of the world. '*O! ter felicitas, si ma bona meruit!*'" While in Paris, the doctor called to see his old friend Chervin, but, to his regret, he found that he had died about a year ago. You well know my opinion of Dr. Coxe; you know I have long considered him one of the most learned physicians in America. He is spending the evening of his life, at the age of 71 years, in the retirement of the largest, and probably the most valuable private library in the United States. His paper on the non-contagious nature of yellow fever is the most conclusive of any which I have ever read upon the subject. You, perhaps, know that I have leaned towards the contagious nature of the complaint for many years, but my observations have only been drawn from pretty extensive reading upon the subject, and not from actual observation, having never seen a decided case of yellow fever in my life. I must confess, however, that I could not, if I would, invalidate any of the arguments of the doctor in this communication. He has kindly put it into my hands for perusal before sending it to you, and, without wishing to revive the angry feelings, which have long since subsided, upon the subject, I trust that you will see fit to publish it as it is.

It is to me a subject of deep regret that Dr. Coxe should wish to dis-

pose of his rich and most invaluable library, consisting of nearly *fourteen thousand volumes!* It is greatly to be hoped that the medical portion of it which has been so long associated together, may not be dissevered, but that some medical college or institution may purchase it, and thus procure a more valuable library than is to be found in any medical college in the Union. The same may be said of a most valuable collection of minerals which has cost the doctor several thousand dollars, and is calculated for a college or university. Will not some of our colleges avail themselves of this opportunity to purchase it? I saw this collection while on a visit to Dr. Coxé a few years ago, and I thought it the most beautiful collection I ever met with.

Very respectfully yours,
STEPHEN W. WILLIAMS.

[The following is the letter to Dr. Chervin, alluded to above.]

Dear Sir,—You ask my opinion as to the contagious nature of the yellow fever—a subject which for many years may be considered as dividing the medical world. I wish anything I could say, might have the effect of settling the dispute; but I have not the vanity to suppose I can reconcile such conflicting opinions. It unfortunately is the case, that many, perhaps I might say all the known facts upon this subject, are, like a two-edged sword, capable of being wielded with equal dexterity by the respective combatants. I have, it is true, my own sentiments upon the occasion, and these are altogether in opposition to this disease being contagious—my reasons for which, whether sufficient or not, will be seen in the progress of this communication.

I cannot avoid saying, in the commencement of my remarks, that a proper and well-defined view of *contagion*, has never yet been given. We speak of it continually, as if it were a non-entity—and altogether independent of every created matter; a simple, rather than a compound substance. The same may be said of the term *infection*; between which, and contagion, no adequate distinction has yet been drawn, so as to preclude those mistakes which arise from the indiscriminate use of words, which, if they have any distinct meaning, should be sedulously attended to in philosophical and medical writings, if we wish to arrive at a perfect understanding of the subject we are investigating. If these terms imply the same thing, let us discard that one which may be deemed most exceptionable. If they imply a distinct state of things, let us endeavor to draw the line between them; so as, hereafter, to avoid the difficulties which their (too often) indiscriminate employment has occasioned.* Let these terms no longer be considered as a nose of wax, capable of being moulded just as it may suit our purpose.

What, then, is contagion? Of its real essence I do not pretend to judge, since, as yet, it has baffled all our researches. It is nevertheless *material*, although in the highest state of attenuation, and incognizable by our senses. We know it only from its effects upon the *living* system, but it

* Our language is devoid, in our disputes on these and many other highly interesting topics, of that precision, which their nature demands; no wonder that we fall in the superstructure, when the foundation is defective.

is not the less material. Of this, none, on reflection, will, I presume, be disposed to doubt; and if material, it must either be some elementary substance, or a compound produced by the combination of two or more of the elementary materials, of which creation is compounded.

Contagion, whether of a simple or compound nature, is a poison to the animal system. I now speak of such as act upon man; for it is well known that what is so to him, is not necessarily so to the inferior class of animals. Probably each separate class has its own *peculiar* contagions, inactive to the rest. Smallpox does not, that we know of, affect any but man. The various epizootic diseases of horned cattle, prove contagious to them, but are not so to all other classes of animals. Some few diseases appear capable of affecting man, in common with individual orders of inferior life. Rabies affects the canine and some other species, and its influence is extended to man, by the intervention of a vitiated saliva.* The vaccine, if derived, as Jenner supposed, from the grease of the horse, affects the cow with an eruption *very different* in its appearance from its alleged origin; and is capable of communication *once* to man, and of thereby preserving him from the smallpox, to which neither the cow nor the horse are obnoxious. Other facts of similar import might readily be accumulated; they will, however, occur to you, and need not be here enumerated.

Although, at first sight, it may appear extraordinary to advocate the opinion that contagion or infection are truly compounds of some of the elements of creation; all objections will cease, if we only consider how greatly the smallest diversity in proportion of even two principles, is capable of modifying the resulting compound. This is exemplified throughout nature. Look at the two presumed simple elements of oxygen and nitrogen, uniting in different proportions to constitute the air we breathe, and the nitrous and nitric oxides and acids—all injurious to life, and each possessing definite and distinct properties! Look at nitrogen and hydrogen: singly, unabsorbable by water—possessed of neither taste nor odor; incapable of forming salts with acids, or soap by admixture with oils—not changing the blue colors of vegetable infusions, and unpossessed of any causticity! United in certain relative proportions, the complete reverse of the above ensues, and a substance of the most singular nature is hereby constituted. Look at the conjunction of oxygen and mercury: by the difference (and that but inconsiderable) of their union in amount, two oxides are produced, possessing very dissimilar properties, and capable, by uniting with acids, of producing salts, still more distant from each other than before. Witness calomel and corrosive sublimate†—the former safe, in almost any dose, the latter poisonous in even a few grains!‡ In all these and many other examples, who could, *a priori*, anticipate such diversified results? Every one may readily augment the number, *ad infini-*

* It is very doubtful to me, whether the saliva of a man laboring under this terrific disease, is ever capable of communicating it to another person.

† As this was written previous to the full knowledge of the true character of these two substances, I have allowed it to remain—but the reasoning is equally the same if we view them both as compounds of mercury and chlorine.

‡ See also the most deadly poison, *prussic acid*, a compound of three innoxious substances in any amount when taken into the stomach separately.

tum. Taste, odor, &c., all become cognizable, by changes thus induced, in bodies previously unpossessed of such properties—in short, in every particular, the new-formed body is totally distinct—and by further combinations with other bodies, are again impressed with properties still more diversified.

With such examples daily before our eyes, can we for a moment doubt, that the mere congeries of certain particles of matter, arranged in relative proportions, to which they may be induced by the laws of vitality, shall, under circumstances of diseased action, be so modified, as to assume a contagious nature—or be productive, by a species of inoculation (no matter whether the skin, the lungs or the stomach be the part to which it is applied), of inducing a similar diseased action in a healthy person? I shall not say by a species of fermentation, like a particle of yeast to a mass of dough; ignorant of the recondite processes which are continually going on in the living system, I would rather at once acknowledge my incompetence to comprehend it, than bewilder myself in the fertile, but fruitless fields of speculation. All I perceive in the facts acknowledged, is that a *matter is produced*, altogether *sui generis* (and specific in its kind); capable of inducing one peculiar form of disease alone—and that, limited chiefly to the same class of animals from which it originally sprang, and which obviously depends on the peculiar circumstances which led to that state of congregations of such associated atoms!

If this general view of contagion is correct, although eluding our powers of research, in the present imperfect state of human knowledge; can it be doubted by any one, that the peculiar aggregation of matter which gives rise to contagion of any kind, *must have had a commencement*; and that, if every known contagion was now to be completely extirpated from the earth, yet that a similar train of circumstances might again take place, and again involve us in the same distress! Nay, does it not follow equally, that new and unknown combinations of matter may be capable of bringing upon us other new diseases, which at present we have no idea of? The origin of syphilis may thus admit of some reasonable explanation, by the assumption of a coincidence of causes, which never had united anterior to the commencement of that disease in the — century. Sprengel, in his excellent history of medicine (2, 499) attempts to prove its origin from a degeneracy of lepra, &c.; and although objections may be raised against his opinions, yet they are sufficiently strong to coerce our belief, that this, or some analogous co-operation, may really have then awakened this form of disease, if it was absolutely unknown in ancient times.

It may be said, in opposition to what has been stated, that matter so attenuated as to escape research, and which is only to be appreciated by its effects, is a stretch of imagination beyond the bounds of probability! but who yet has fully demonstrated the nature of light, of heat, and other imponderable fluids? which produce, nevertheless, effects the most positive. Who has yet analyzed the odor of the rose, of the musk, or of the particles emanating from the body, by which the dog pursues the fox, &c., or by which he can follow his master for hundreds of miles, al-

though still more attenuated by its diffusion through the atmosphere? When these are sufficiently investigated, we may then hope to analyze contagion. But are not those exquisitely attenuated substances material? Do we not believe that a particle of light, so fine, as not to move the dust in its passage, and even to pass through the compact cornea, and even the more compact diamond—do we not, I say, believe it to be composed of *seven smaller parts*? Where, then, shall be learned the limits of the extension of matter? There can be no difficulty with respect to contagion on this *score*, for we want it not more attenuated, than what we already credit. All this, and much more that might be added, whilst tending to evince our ignorance of all around us, proclaims most fully the omnipotence of that Divinity who rules the elements; and should teach us to humble that conceit we have of our trifling powers of comprehension!

What I have said with respect to contagion will equally apply to those miasmatic exhalations to which putrefaction gives origin. So far as we know, there is nothing in animal or vegetable putrefaction, *simply considered*, that is capable of producing disease. It would seem that to these, *something specific* must be added, by the laws of affinity, which acts differently on the system from the simple gases primarily evolved in those processes—probably a certain combination of gases, individually innocuous, but thereby becoming possessed of properties altogether distinct from those of the elementary ingredients. If we admit such a combination to be only fortuitous, not always or necessarily ensuing, we have a probable explanation of certain forms of disease being more associated with certain localities than with others; but why such diseases should be capable of reproduction in others, by exposure to the diseased persons (if such is really true) apart from any connection with the primary source, is perhaps incapable of being understood; and still less so, why, in those diseases strictly called contagious, *all further* susceptibility of receiving the disease is done away in the individual, although again renewed in his offspring!

It is a question of deliberate consideration, whether any disease, truly and strictly contagious, can be taken a second time. (I speak independently of the few solitary instances to the contrary, which, as exceptions, may be regarded as strengthening the rule.) If this is truly the case, contagious diseases may be considered as of very limited amount, and yellow fever *will not* come within those bounds; for ample experience proves, I apprehend, that this disease may be taken an indefinite number of times. In this point of view, the plague itself may be considered as devoid of the true character of contagion.

One thing appears to me certain; that in considering the subject of contagion or infection, our views are too much connected with *quantity*, rather than with the *quality* of the emanating matter. In inoculating for the smallpox, the most inconceivable portion of matter inserted (and that matter, simply considered, *without reference* to the unknown specific principle connected with it, cannot induce the disease) is adequate to induce it in one who has never previously been exposed to its influence. And if we suppose it taken,

by merely passing within the sphere, in which the volatile contagious matter from another person exists, it is still more attenuated. Now what proportion actually exists between the original source and the disease emanating from it? If *quantity* were the sole consideration, ought not the supervening disease to be proportioned to the amount of the matter inserted? But this is obviously by no means the case; for however small, the result is equally certain and efficient.

The same remarks apply equally to those exhalations which, in *appropriate recipients*, are capable of inducing the varied types of intermittent, bilious and other fevers, &c. I say *appropriate* recipients! for such exhalations, &c., are innoxious to those who are indisposed to favor the formation of disease; by having avoided the previous action of certain predisposing, and often, long continuing causes, such as heat, cold, moisture, fatigue, debauch, &c.

Some of these remote and predisposing causes seem to be more peculiarly necessary to the production of certain diseases. Why is yellow fever the offspring of the torrid, rather than of the temperate or frigid zones? Why, in the extensive intercourse of France and Great Britain with their West India possessions, has this disease never been introduced into those countries, if contagion were an associated property of that complaint? We cannot doubt but that smallpox, &c., taken from those islands, would equally pervade them, if carried there. The peculiar temperature of those climates, together with the absence of other co-operating causes, renders it impossible to produce an epidemic; although their intercourse, compared with that of America, is infinitely greater. The local causes of disease in those countries, and which in hotter climates would induce the yellow fever (and do *occasionally* in them) can only promote a disease of less fatality. Not so in the warmer latitudes of Europe and America. Here, everything, at times, co-operates to favor its production. But, if it be admitted that the yellow fever is conveyed *by contagion* from the West Indies, to Cadiz, Gibraltar, Charleston, Norfolk, Baltimore, Philadelphia, &c., why is it, that this assumed contagious character is lost by removal but an inconsiderable distance from the original seat of its breaking out? In Philadelphia, in 1741, 1761, 1797, &c., its ravages were limited to a few squares of the city. Even in 1793 and 1798, when more extended, it could scarcely be regarded as an epidemic, for it lost that character at four or five squares westward from its commencement on the borders of the Delaware. Nurses, physicians, and the various attendants of the hospital and burying grounds, although exposed to the numerous cases which died around them in every dreadful form of highest malignity; although hundreds were dissected, and the black vomit swallowed as matter of experiment; not a solitary instance occurred, which could be in the remotest degree ascribed to contagion. Of those who took the disease in our city, and died of it in the country, surrounded by their friends and acquaintances, no instance of contagion, *void of all suspicion*, was exemplified! How unlike contagion this, in the real estimation of the word! If a few solitary cases of persons said to have been affected under such circumstances by the sick, really occurred, must we overlook (for the purpose

of maintaining the contagious nature of the disease) the various excretions from different parts; compounds of vegetable and animal matter, in a putrid state, and therefore capable of undergoing precisely similar changes with those on which the disease originally depended? Would not exposure to such causes be sufficient to induce in those of the attendants who were predisposed to it, a similar train of symptoms—which at best never extended beyond themselves. Can such solitary instances, if really substantiated, be set in array against the host of contradictory evidence?

But it may be demanded, why the existence of yellow fever in our seaports should not be uniform every summer, if it be of domestic origin? This question may equally be demanded if it be brought by contagion from foreign climes. The intercourse with the islands is nearly uniform—and there the yellow fever annually prevails amongst the foreigners and newly arrived. We may, however, reply, that diversity of season, and the want of some or all of the causes, will adequately explain this occasional exemption. Is it not precisely the same in every intermittent district? Is this disease, every year, in type and force, equally the same? It is possible that in all these complaints, a greater or less admixture of vegetable and animal putrefaction may determine the character and type of the disease. A certain definite proportion of the volatile emanations from both sources may be required, in order to produce that form of matter, on which the existence of the peculiar disease depends. To this we may add, the temperature, more or less continued; together with the constitutional character and pursuits of each individual.

After what I have said, it is unnecessary for me to add, that I have never seen any case, which, to my mind, conveyed the idea of contagion in the yellow fever, in any of the years in which I have been conversant with it in our city. Nor can I think that any of the observations with a contrary view, have overthrown the strong grounds on which its non-contagious nature is maintained, by the numerous writers on this interesting subject. When we remember that contagion, infection, poison, are terms in fact altogether relative, and that they all are rendered, by habit, innocuous to the system; is it not proper, that in considering them we should invariably have a reference to these circumstances? Is smallpox contagious to man? It is so to him once only in his life, and has no influence on inferior animals; or if it has, it is under a form of disease different from that it produces in man. This is altogether inexplicable, except on the presumption, that by the changes it induces in the system, the same combination of foreign agencies can never meet with its recipient in the same exact state—or that man, in regard to this contagious matter, is, by its previous action, placed upon a footing with the inferior animals. All is mysterious, and dependent on operations occurring in the ultimate texture of man. By some analogous reasoning, we can only comprehend why vaccination renders inert the action of smallpox on the human system; by preventing the future union of those co-operating agencies, which are essential to the production of that specific action, on which the formation of variolous poison may be presumed to depend.

I might much extend these speculations, but I hasten to conclude. In the destructive fever of 1793, three out of five of my fellow students, under the direction of our illustrious preceptor, Dr. Rush, fell victims to its fury. Although the danger was then greatly heightened, by the universal and accredited belief of its contagious nature; circumstances, even at that period, led me to doubt of the validity of the opinion. My own continued escape, although exposed to every grade of the disease; even sitting up during the night with some of my patients, yet no way affected by this continual exposure; the not unfrequent discharge by vomit over me, and inhaling the breath of my patients, whilst bleeding them; these and similar facts gave me much confidence of escape, and tended not a little to destroy the impression of contagion. So powerfully, however, did these circumstances operate on the mind of my respected friend and fellow student, Mr. Edward Fisher (now a practitioner at Columbia, in South Carolina) that he unequivocally maintained its non-contagious nature, and upheld his conviction on this point in a series of remarks, or history of the disease, which he made during its progress; and which served at a subsequent period as the basis of his thesis for a medical degree at Edinburgh. In that celebrated school, however, he was obliged, I believe, to suppress this opinion, which opposed the ruling doctrine of contagion, by persons ignorant of the disease but by name, or by the writings of others. So far as I know, I believe him to have been the first who in this city or elsewhere ventured to maintain an opinion opposed to those of general belief. No credit has ever been given him for his stand, thus early taken; and I have therefore thought I owed it, both to friendship and truth, to state the above particulars.

Although the above observations may be of a more general and extended nature than your views required, I could not well avoid bringing them forward to your notice; and hope, that if not correct, they may at least tend to elicit a more judicious exposition of the subject from others.

With sentiments of the most respectful consideration for yourself; and duly appreciating the benevolent motives which have led you to engage, during a long series of years, in the perilous undertaking you have had in view—accept, dear sir, my best wishes for its successful termination in the cause of humanity and truth.

JOHN REDMAN COXE, M.D.

MEDICAL MATTERS IN PRUSSIA.

Berlin, Dec. 15th, 1844.

To the Editor of the Boston Medical and Surgical Journal.

DEAR SIR,—In sending you a few lines from this place, I am not quite certain whether it is a compliance with a request from yourself, or merely a gratification of a desire not to be wholly forgotten by yourself and some of your readers.

I have been here nearly a month, and heard several of the professors at the medical school, which ranks now as the second in Germany, although none of them are superior as lecturers to many in America,

and the graces of oratory are as foreign to the profession here as elsewhere. One is a little surprised to see in nearly all the lecture rooms of a Prussian University, a sprinkling of uniforms. The law requires of every man in Prussia, without any exception (unless of the princes royal) or excuse, unless of sickness, a year, or, if equipments and subsistence are provided by government, three years of actual service, and the student of medicine or theology has perhaps just come from the barracks or morning drill.

Two of the most largely attended clinics, are those of Dr. Jaenchen at the Charité, and Dr. Dieffenbach at the University Hospital; the first an ophthalmic clinique, the last a general one, at which operations for tenotomy abound, in which Dr. D. is certainly very adroit.

One of the most interesting institutions of Berlin, is that for the instruction of the deaf and dumb, at which the new method is pursued of teaching them articulation. The success with which it is attended is certainly very astonishing, and, to an inexperienced observer like myself, quite satisfactory. The pupils converse with the instructors and with each other, so as to be intelligible to an ear as little practised as mine in the German language. The older ones can also read aloud and with a distinct enunciation, from an octavo volume of reading lessons, any passage that may be selected. But notwithstanding that by a patient imitation of the movements of the lips, tongue, larynx, and chest involved in articulation, this system seems to have achieved an impossibility; its expediency, as a general system of education for deaf mutes, is doubted by many practical observers, who say that the great length of time necessarily devoted by those who possess only ordinary imitative faculties, to the mere acquirement of an articulation, leaves not enough for more direct and important mental culture. A gentleman from New York is now here for the express purpose of investigating the methods and merits of the system, and his report will undoubtedly be of great value to those interested in the subject. But whether it be destined to supersede the older plan or not, it must be considered a very noticeable example of the ingenuity and perseverance of German teachers. This is, I believe, the largest institution of the sort in Germany; that at Liepsic, the oldest.

The schools for the instruction of the blind are here, and in the other cities which I have visited, less extensive than the one in Boston, which enjoys here a very high reputation. The education of the two blind mutes is spoken of in the strongest terms of admiration, and regarded as a much greater achievement than the teaching of the dumb to speak. Attached to the Deaf and Dumb Institute, is a class of idiots, in the instruction of whom great pains are taken, and a good deal accomplished.

You will not be surprised to learn, that just now, two new systems of medical practice are budding into favor in Germany. One is called the Traubencur (grape cure), and consists in living chiefly upon grapes, of which several pounds are to be eaten daily. I have not learned that its application is limited to any particular forms of disease, and am not able to give you the name of the originator of this happy discovery. It is now

chiefly heard of in the regions of the Rhine, to the vineyards of which patients are, during the autumn, recommended to resort. The second system at present less known, is entitled Aeropathy, and its paternity is claimed by a Dr. Flekeles of Prague, in Bohemia. The particulars are to be given in a book, which is forthcoming, but its essence is said to consist in alternate perspirations and exposures to currents of cold air. The first of these, the Traubencur, may be considered to be at present the *fashionable* one in Germany, but will probably soon yield to the other, of which the applicability is much more general, and the effects probably more decided.

On the route hither I passed a day at Halle, the medical school of which is a very good one, but chiefly observable from having in its possession the anatomical museum of the three Mechels. Some of the vast preparations by the elder Mechel are exceedingly elaborate, and, though more than a century old, in the most perfect condition. Connected with it is a very extensive collection in comparative anatomy, of more recent date. The anatomical prosector of the school claims to have made some discoveries in the comparative anatomy particularly of vertebrated animals. The only one which he pointed out to me, related to the difference in the form and arrangement of the spinous processes of the vertebræ, which he asserts, are found in every animal to be peculiarly and perfectly adapted to the movements and uses required of them. I have a faint idea, which is perhaps in the minds of some of your readers a vivid one, of having, a long time ago, on the other side of the water, read and listened to substantially the same statements. I intend shortly to leave for Vienna, and may write to you again.

JOHN H. DIX.

NOTICE OF THE LATE DR. JOHN SCAMMELL, OF BELLINGHAM.

[Communicated for the Boston Medical and Surgical Journal.]

DR. SCAMMELL was born in Mendon, Mass., Dec. 30, 1761, and died in Bellingham, March 9th, 1845. After serving out a short tour of duty in the Revolutionary Army, he entered upon the duties of his profession (having spent the period of pupilage under the direction of his father) before he had arrived at the age of 21. His father and grandfather, the latter of whom emigrated from England, were both acceptable physicians in the town of Mendon. The grandfather, who had studied medicine before his emigration, did not intend to practise; but a neighbor, being taken suddenly sick, and physicians, in those days, not being found at every third house, he called in and prescribed for him. The patient being soon relieved, and the Dr.'s secret now out, he quickly found himself employed in a large circle of practice.

The subject of the present notice was actively engaged, for more than *forty* years, in the laborious and responsible duties of his profession; and always enjoyed, in an unusual degree, the respect of his professional neighbors as well as the confidence of his numerous patients. In the various relations of social and private life, Dr. S. was highly esteemed, al-

ways discharging the duties of those relations in a manner alike honorable to himself and creditable to the community among whom his lot was cast. His memory will long be cherished by those who have been benefited by his counsels as a physician, and a large circle of acquaintance will look back with pleasant recollections upon the many agreeable hours they have passed in his company.

For the last twenty years, Dr. S., by reason of infirmities, consequent upon a rheumatic affection, had ceased to *visit* his patients; though, until lately, his opinion and prescriptions were frequently sought by those who were able to be carried to his residence. Last April, having now become very decrepid, so as to be obliged to support himself with two staves while walking, the doctor had a fall upon the ground, by which his thigh-bone was fractured near the trochanter. This fracture never united, and from this time he was confined to his bed. His death was rather the result of old age than a consequence of the injury.

Mendon, Ms., March 15th, 1845.

JNO. GEORGE METCALF.

CORONERS' FEES TO PHYSICIANS.

To the Editor of the Boston Medical and Surgical Journal.

SIR,—I noticed in yours of March 12th, 1845, an article entitled "*Post-mortem Fees at Coroners' Inquests.*" In relation to that subject I would remark, that an order was introduced to the Legislature of Massachusetts, at their last session, directing the Committee of the Judiciary to examine into the expediency of making provision by law, for a suitable compensation to physicians called upon by a coroner to make a *post-mortem* examination. The committee reported that it was inexpedient to legislate upon the subject. On being inquired of by the mover of the order, the committee informed him, that a physician being called upon by a coroner to make a *post-mortem* examination, has a right to charge the coroner a suitable compensation for the service, and that the law will enable him to recover it, in the same manner as for professional services in any other case. The coroner has his remedy against the State or county. See Revised Statutes, chap. 140, sec. 11.

E. BUCK.

Boston, March 27th, 1845.

[Messrs. Bell of Boston, Paige of New Bedford, Hopkinson of Lowell, Phelps of Ware, Chapin of Uxbridge, Osgood of Northfield, and Galpin of Stockbridge, constituted the committee referred to in the above communication.—Ed.]

VACCINATION AND INOCULATION.

[At a meeting of the Medical and Surgical Society, in London, Jan. 28, Dr. George Gregory, Physician to the Smallpox Hospital, gave some account of the variolous epidemic of 1844, and also made some very important suggestions in regard to the methods of preventing the liability to contract the disease. The following is from the Lancet.]

After noticing the remarkable freedom from smallpox which the metropolis enjoyed during the years 1842-3, the author adverted to the rise of the present epidemic, which he dates from the 21st March, 1844, when the weekly deaths by smallpox suddenly rose from twenty to thirty, and have continued progressing (with some irregularities) from that period to the present.

The admissions into the Smallpox Hospital, in 1844, amounted to 647, and exceeded by one the admissions in the great epidemic of 1781, being, with the exception of 1838 (when the epidemic raged throughout the entire year), the greatest number ever received into the Hospital since its foundation in 1746. The character of the disease was severe. The deaths amounted to 151, being at the rate of twenty-three and a half per cent. In 1781, when the same number of patients was admitted, the deaths were 257, being at the rate of forty per cent.

Of the total admitted, 312 were reported to have been vaccinated, and had cognizable cicatrices; 22 professed to have been vaccinated, but no scars were detected; two alleged, but on unsatisfactory grounds, that they had been inoculated for smallpox in early life.

Among the 312 vaccinated, 100 had the disease in the very mild form usually called the varioloid; in a certain number no mitigation was observed; of the whole number, 24 died, being at the rate of nearly eight per cent. On this section of the admissions, many of the cases received during the year displayed features of individual interest. A variety of them were stated in detail.

A remarkable feature in the history of the past year was the increasing desire on the part of the public for re-vaccination.

Founding his views on the now indisputable fact that smallpox spreads as widely *without* as with accompanying inoculation, and on the now equally established fact, that smallpox after vaccination proves fatal at the rate of seven per cent., while inoculated smallpox is fatal only at the rate of one fifth, or one in 500, the author proceeded to argue that it is unwise to prevent variolous inoculation *in toto*. Persons verging on puberty might, he said, with great prospect of advantage, be inoculated *after vaccination in early life*. If, as happened in the case of his own son, the inoculation failed to produce constitutional symptoms, the permanent security of the party was fully established; on the other hand, if febrile symptoms followed, the disease would probably be mild; and at all events, would be undergone under the watchful eye and care of parents. As it is, the disease is often received at a period of life the most distressing—as by young women on the eve of marriage, by mothers in confinement, or by young men just embarking for India.

The author instanced a variety of other important objects which might be gained by a repeal of that part of the "Vaccination Extension Act" of 1840, which prohibits qualified medical practitioners from inoculating in England and Ireland, and he concluded by recommending to the legislature such a measure; and to the medical profession (where such permission may be granted), the establishment of a system of infantile vaccination, strengthened and made doubly sure by adult inoculation.

The practice of inoculation might usefully be restricted from the period of life extending from the age of 10 to 20.

Dr. Webster thought the Society and the profession were much obliged to Dr. Gregory for the excellent paper just read, which contained so many important facts and statistical details upon a subject of great interest. He did not at present intend to enter upon the various points alluded to by the author; indeed, it would be difficult to controvert many of the conclusions come to by Dr. Gregory, who had such ample opportunities, and was so well qualified, to form correct opinions respecting vaccination. However, there was one important inference which he (Dr. W.) drew from the paper, namely, that the public, notwithstanding the doubts of some on the subject, now appeared to have greater confidence than previously in the protective influence of the cowpox, as shown by the larger number of applications for re-vaccination at the Smallpox Hospital, during the past than any previous year. This was very satisfactory, and induced him to ask the author, whether many cases of smallpox occurring after re-vaccination had come under his own notice, as that would prove the efficacy of re-vaccination, from rendering the individual less susceptible of smallpox than previously. He (Dr. W.) was most unwilling to disbelieve in the protective influence of vaccination, when properly performed; and, in proof of its efficacy, he would mention a strong instance which lately came under his immediate observation in a large establishment he frequently visits. In March last, one of the criminal lunatics confined in Bethlehem Hospital was attacked with symptoms of variola, but having been previously vaccinated, the disease assumed a mild form. One or two other inmates were then affected, and the complaint subsequently extended to the other wards. Of the patients attacked, unfortunately one had never been vaccinated. In this case the disease assumed a most virulent form, and terminated fatally in a few days. This was the only death met with; and although five or six other instances occurred, despite the strictest surveillance and seclusion of the patients, the malady did not spread further, which would have been a most serious matter in an institution like Bethlehem Hospital, having a population of about 700, including the lunatics and the residents of the house of occupations. How the smallpox was first introduced into the criminal wing it is difficult to determine; for although every inquiry was made, it was impossible to trace its origin. The person first attacked had held no communication beyond the walls of his own division of the establishment, excepting by a letter he received from a distant part of the country; but this could not have produced the disease. It is, however, right to mention, that smallpox then prevailed at a little distance from the Hospital, in South Lambeth, and as westerly winds prevailed much at the time, perhaps the infection might have been wafted in this way to the prisoner. He would like to ask Dr. Gregory's opinion on this subject. Respecting the important proposition of the author to resume the old and now illegal practice of inoculation, that was a very grave subject, and required most mature deliberation. He (Dr. W.) acknowledged, although disposed to pay every respect to an act of the legislature, that he did

not consider parliament to be the best tribunal to settle disputed points in medical practice ; and cases might arise, when inoculation might be advisable ; of course, only qualified persons should be allowed to perform such an operation, whilst the greatest care and precautions were always taken to prevent the dissemination of so virulent a disease as smallpox sometimes appears, even when artificially produced.

Dr. Gregory, in reference to one of the questions of Dr. Webster, remarked that the paper contained the case of a girl named Eagle, which in itself was an answer to the query. This girl had been vaccinated in infancy, and subsequently re-vaccinated with great care ; she nevertheless became a patient of the Smallpox Hospital. These cases were not uncommon. It might be urged against the validity of these cases, that neither vaccination nor re-vaccination had been properly performed. These objections were easily made and difficult to contradict. With respect to the mode of the introduction of the smallpox into Bethlehem Hospital, as mentioned by Dr. Webster, he thought it hardly probable, though it might be possible.

Mr. Davies (Hampstead) had, in 1798, received orders to inoculate every man in his regiment, in whom there was not some unequivocal marks of the smallpox. Two of the soldiers informed him that they had had the cowpox, having been employed in Yorkshire as cow boys, and that therefore it was useless to inoculate them. Neither of these men took smallpox, although he inoculated them a great number of times. He attributed the failure of vaccination either to the useless mode in which it was performed, or to the carelessness of parents in failing to give the surgeon an opportunity of verifying the success of the operation. He related a case in which he had vaccinated an infant suckling at the breast of its mother, who was suffering from smallpox ; the infant did not contract the disease, though it continued at the breast ; the mother died from the attack. He related an instance to show the importance of vaccinating from a proper vesicle. He had vaccinated several members of a family, and re-vaccinated them a few days after. He was subsequently requested to vaccinate other children from an arm, the appearance of which he did not approve of, and declined to operate. The children were subsequently vaccinated from this arm by another practitioner, and every one of these suffered afterwards from smallpox, whilst those he (Mr. D.) vaccinated all escaped.

Mr. Streeter inquired the experience of Dr. Gregory in reference to the occurrence of smallpox during pregnancy. He had seen two cases of the kind—one in 1838, and one since ; the patients were six months advanced in pregnancy, and recovered.

Dr. Gregory had met with cases of smallpox occurring during pregnancy on more than one occasion. The violence of the disease, since the prevalence of vaccination, had fallen on the parents and adults generally, rather than on the children. He did not agree with Dr. Williams as to the identity between smallpox and vaccinia, and thought that that gentleman had committed two main errors in his pathology. Natural and inoculated variola were in no degree different in their power, as had been

frequently proved in cases of consecutive smallpox after the natural or inoculated disease. He believed that there was only an approach to identity between smallpox and vaccinia, but not more than between measles and scarlet fever. He related a case in which an aged couple were vaccinated to preserve them from smallpox, although in early life they had been inoculated. Perfect vaccine vesicles were produced on their arms. If vaccination were thus successful at an advanced age, and subsequent to inoculation, he thought it a strong proof of the non-identity of smallpox and vaccinia. Many facts, indeed, might be adduced in support of this non-identity.

Dr. Williams alluded to the experiments of Mr. Ceely, as conclusive evidence in favor of the identity of the two diseases. The cases related by Dr. Gregory did not militate against this identity, any more than did the occurrence of smallpox after vaccination.

Dr. A. P. Stewart made reference to a number of cases which had occurred in his practice, all tending to prove that vaccination was a sufficient preventive to smallpox, when it was properly and efficiently performed. When it failed, it had not been properly applied. In confirmation of this view, he referred to the lately-published report of the Royal Jennerian Institution. His experience at the Glasgow Infirmary enabled him to confirm a statement of Dr. Cowan, that smallpox in that city was perpetuated chiefly by the unvaccinated Highland population. M. Chomel had well said, that we "could not expect more from vaccination than from smallpox itself," for in many cases smallpox, and that of the worst kind, had attacked the same person twice or thrice, and terminated fatally.

Dr. Gregory remarked, that, even if his plan were fully carried out, still nearly one half of mankind would be under the protection of Jenner's discovery, for one half of the children born in Liverpool died before puberty, and 300 out of every 1000 born in London did not reach adult age. The remaining portion only would be subjected to inoculation.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, APRIL 2, 1845.

Origin of Ergot.—In the course of a botanical lecture, the other day, before the Lowell Institute, Dr. Gray presented some exceedingly large diagrams, illustrative of the true appearance of spurred rye, under a powerful microscope. It is now settled, beyond all further question, that the grains that become diseased in the ear, and which are well known to possess extraordinary medicinal properties, have growing upon them a parasite plant. Minute as it is, when magnified, it actually astonishes the spectator with the luxuriance of its growth. The roots shoot through the kernel of the rye in all directions, while the epidermis is covered with a miniature forest. But the wonder does not stop here. This, like all the fungi, including the mould in cheese and on bread, produces seeds in prodigious abundance, wholly invisible to the unassisted eye, which fall down by the

stalk, where they remain without germination, till the proper food provided by nature for the sustenance of the blight is introduced into the soil, when they are immediately quickened into life—and being carried up on the rising grain, seize with their unperceived tendrils the tender blossoms, and finally come to maturity in fungoidizing the rye.

If we understood Dr. Gray rightly, this peculiar parasite also appears on some other cultivated grains, and even grasses, but rye exhibits its most perfect development, and consequently suffers an entire destruction of its original organization. Ergot, therefore, owes its origin to the modifying influence of fungi, which are as perfect in structure as the highest orders in the vegetable kingdom. There is nothing fortuitous in the process, either. The seeds are produced, dispersed, and germinate in the same manner those do which are tangible. In fact, there is a striking resemblance in the economy of these humble, unseen, and almost unsuspected agents of nature, and the common puff balls. These apparently useless things, which seem to contain nothing but an impalpable powder, like smoke, even when of the smallest dimensions, throw off millions of seeds. These seeds are so light, that they are borne through the atmosphere, unperceived, and ultimately settle down upon the earth. There they remain, dormant, perhaps hundreds of years, till, in the course of events, the accumulation of that certain something, necessary for the sustenance of the incipient plant, is deposited in ample quantity to rouse the seeds from their long slumber, when a crop of puff balls makes its appearance, to the surprise of those who have not studied that captivating branch of botany explanatory of these phenomena.

According to Dr. Gray's explanations, therefore, a field of ergot might be raised with a degree of certainty. By sowing with rye gathered where the spur had previously appeared, the reproduction of the same fungous enlargement might, under ordinary circumstances, be expected.

A New Hospital in Boston.—Such is the increasing population of Boston, that philanthropists perceive that more hospital accommodations are required. The Massachusetts General Hospital has grown into a colossal institution, but still it does not and cannot receive all the applicants for charitable medical and surgical treatment. By the very nature of its organization, there are many free beds, so called, actually purchased by wealthy gentlemen, who have given large sums of money to the hospital—and they have the privilege of sending their friends, and, indeed, any persons they may choose, to occupy them—and while there, they receive every possible attention, without cost to themselves or additional expense to their kind patrons. The number of beds belonging to the corporation, which are occupied by persons paying by the week, has been too small, and hence the late successful subscription was undertaken, to enlarge the edifice by additional wings. This will simply make more room for those who are able to bear the cost of becoming inmates. With the constant rush of strangers to the city, now the great commercial centre of the north, the additional rooms, it is thought, will speedily be found inadequate to supply the demand for them. All this while, there is a class of highly respectable sufferers, who can neither afford to pay for a bed, nor can they possibly procure a free one, and they deserve a better fate than to go to the almshouse. This description of patients is believed to be very numerous, and

it is quite certain that while society exists in its present form, their number will never be less. A hospital, at this present moment, exclusively for them, would doubtless be well filled.

Dispensaries do not meet the exigency of the case at all, and it is perfectly idle to attempt to bring them forward as a reason why such a hospital is not needed. At East Boston—which is destined, from all appearances, to become the manufacturing section of the city, and which will have a dense population within comparatively a few years—land is cheap, and ample grounds might be secured at a reasonable rate. We look to East Boston, therefore, as a proper place for the location of a new hospital at no very remote period. With the known benevolence of the citizens of this rich and populous place, we have full confidence in believing that a large subscription might be secured at once, for so humane and useful an object.

Prosecution for Malpractice.—Within a few months past, a prosecution was commenced in this city against a surgeon at Lowell. He had operated upon a female, and had done all that any one could have accomplished with instruments, on internally diseased eyes; but she probably hoped to get a comfortable sum in the form of *damage at law*, in consequence of not being relieved. The whole unrighteous effort was quashed at the outset, by the testimony of one or two oculists of Boston.

For the purpose of exhibiting the character of prosecutions for malpractice, and for the sake of exposing the motives which prompt unprincipled people to advise such measures, it would be gratifying to publish the particulars in this instance. Who will favor the Journal with the facts?

Foreign Medical Intelligence.—A communication appears in the Journal to-day, from Dr. Dix, a well-known physician and oculist of Boston, who has been in Europe some time past, improving himself in ophthalmic surgery, to which he is particularly devoted, almost to the exclusion of other professional business. At the latest date he was in Berlin, where his published letter is dated, having visited all the great establishments of the continent, which promised any thing worthy of special regard in his favorite department. Incidentally, we are informed that Dr. Dix is expecting to return home about June.

Dictionary of Practical Medicine.—Part Fourth of Copeland's much-sought-for work, comprising general pathology, the nature and treatment of diseases, morbid structures, &c. came through Mr. Mussey, of Cornhill, early last week. It will be recollected that the revision and additions, to bring it down to the last moment of publication, are made by Dr. Lee, of New York, who is doing all in his power to give to it the character the medical public has been led to expect. This number completes all articles under the letter C, and closes with a finished paper on *delirium with tremor*. Fifty cents, only, is the subscription price for the monthly parts of this excellent American edition, which may be had of the booksellers in all our large cities. The Harpers, of New York, are the publishers.

Insane Hospital, Maine.—Dr. James Bates, of Norridgewock, has been elected medical superintendent of this institution, in place of Dr. Ray, re-

cently resigned. Dr. J. Prescott, of Farmington, Dr. Swett, of Parsonsfield, and Dr. Booth, formerly assistant physician of the hospital, were candidates also for the office.

The New Anatomy Law in Massachusetts.—The following Act, which is officially styled "An Act concerning the Study of Medicine," was passed during the last month by our Legislature, being a modification of the Act passed in 1831 "to legalize the Study of Anatomy in certain cases."

"SECT. 1. The overseers of the poor of any town, and the mayor and aldermen of any city in this Commonwealth, shall, upon request, give permission to any regular physician, duly qualified according to law, to take the dead bodies of such persons as are required to be buried at the public expense, within their respective towns, or cities, to be by him used within this Commonwealth for the advancement of anatomical science, preference being always given to medical schools by law established in this State, for their use in the instruction of students; and it shall be the duty of all persons having charge of any poor-house, work-house, or house of industry, in which any person, required to be buried at the public expense, shall die, immediately to give notice thereof to the overseers of the poor of the town, or the mayor and aldermen of the city in which such death shall occur, and the dead body of such person shall not, except in cases of necessity, be buried, nor shall the same be dissected or mutilated until such notice shall have been given, and permission therefor granted, by said overseers or mayor and aldermen.

"SECT. 2. No such body shall in any case be surrendered, if the deceased person, during his last sickness, of his own accord, requested to be buried, or if, within twenty-four hours after his death, any person claiming to be of kindred or a friend to the deceased, and satisfying the proper authority thereof, shall require to have the body buried, or if such deceased person was a stranger or traveller who suddenly died; but the dead body shall, in all such cases, be buried, and no body shall be surrendered until the physician requesting the same shall give to the board, by whose order the same is to be surrendered, the bond required by the twelfth section of the twenty-second chapter of the Revised Statutes.

"SECT. 3. The tenth and eleventh sections of the twenty-second chapter of the Revised Statutes, are hereby repealed.

"SECT. 4. This act shall take effect from and after its passage."

The word *friend* has heretofore made the difficulty. The mayor and aldermen of any city and the overseers of towns, are to decide who are *friends* in this case—and the individual so declaring himself, must have his claim submitted for examination before he can take the body he applies for in the character of a friend, or have it buried.

Creosote in Sea-sickness.—To THE EDITOR. Dear Sir,—A medical friend writes me that he recently had occasion, while at sea, to make trial of the creosote as a remedy for this complaint, and found it of decided effect in preventing the nausea and removing the sickness, so universally attendant upon a sea voyage. He had previously taken other remedies without effect. The dose taken was one drop. I am aware that this has

been recommended, but am confident that it is as yet but little known in the treatment of that most distressing of all maladies—"nausea marina."

Boston, March 22, 1845. Respectfully, FITZ EDW. OLIVER.

Alcoholic Drinks.—The following certificate has been signed by 120 highly respectable medical men in England. It is thought that it will yet be much more numerously signed, though it has been found very difficult, thus far, to draw up a paper which in *style, language* and *phrase* will suit all minds.

"We are of opinion that there is no principle of strength or nourishment for the human frame in alcohol, or generally in drinks of which it forms a part, such as ardent spirits, fermented wines, cider, ale, beer, porter, and others; that any trifling portion of nourishment contained in the last three is greatly exceeded by that in barley water, porridge, or gruel, made from an equal quantity of grain; that alcoholic beverages generate ultimate weakness instead of strength; that alcohol never entirely assimilates with the corporeal system; that intoxicating fluids are in no wise necessary to persons in ordinary health, nor are they required for any particular constitution; that the daily or habitual use of any portion of them (much more what has been generally, but erroneously, thought a moderate portion) is prejudicial to health; that the excitement or cordial feeling they create is mere stimulation, which departs in a short time, and is unproductive of any element of real strength; and that, contrary to ordinary opinion, the health and average comfort of the nation would be greatly promoted by their entire disuse as beverages."

Percuro Pills.—Having been informed that the percuro pills, referred to a few weeks since in the Journal, were not made by Dr. Kelly, as we then stated, we cheerfully correct the error. We were led into it by a circular, which must have been issued by some other person, if the above information be correct.

Medical Miscellany.—The New Jersey Society of teachers and friends of education, at a quarterly meeting, March 7th, resolved, "that the infliction of corporal punishment, as a penalty of crime, is justified by the Bible, and recommended by the experience of past ages, and therefore ought not to be prohibited in schools."—Dr. Samuel Webber, of Charlestown, N. H., has been elected a member of the "Royal Society of Northern Antiquarians at Copenhagen."

TO SUBSCRIBERS AND CORRESPONDENTS.—The attention of subscribers is requested to the bills which have recently been enclosed in their copies of the Journal. As the privilege will not be enjoyed much longer of remitting money, wholly without expense, through postmasters, it is hoped all who are in arrears will send the amounts due, by mail, without delay.

The communications of Drs. Leonard, Green and Tabor will have an early insertion.

Number of deaths in Boston, for the week ending March 29, 39—Males, 15; Females, 24. Stillborn, 6. Of consumption, 2—typhus fever, 1—cancer, 2—dropsy on brain, 3—infantile, 4—disease of the brain, 1—lung fever, 3—dropsy, 1—intemperance, 1—accidental, 2—fever and ague, 1—croup, 3—debility, 1—old age, 2—marasmus, 1—scarlet fever, 4—chilblad, 3—disease of the heart, 1—abscess, 1—throat distemper, 1—unknown, 1.

Under 5 years, 17—between 5 and 20 years, 3—between 20 and 60 years, 14—over 60 years, 5.

Removal of a Coin from the Larynx by Inversion of the Body.—An individual amusing himself by tossing up a shilling, and catching it in his mouth, it slipped through the glottis. The accident gave rise to comparatively little inconvenience. The coin seemed to the patient to be fixed at the cricoid cartilage, and he had an impression that it could be displaced were he to stand on his head. This impression corresponding with the opinion of Dr. Duncan and his associates—

"The man was placed with his shoulders against the raised end of a pretty high sofa, and then being seized by three of the most powerful of those present by the loins and thighs, he was rapidly inverted, so as to bring the head into the dependent position, and, after a shake or two, Dr. Simpson at the same time moving the larynx rapidly from side to side, the shilling passed into the mouth and fell upon the floor. Not the slightest cough nor dyspnoea was produced, and the patient immediately started up, delighted with the result. He was now perfectly free from uneasiness, and there was a marked change in the character of the voice. He had not the slightest subsequent bad symptom."—*Northern Jour. of Med.*

Extirpation of a Cancerous Tumor of the Velum Palati.—M. Blandin exhibited to the French Academy of Medicine, a patient from whom he had extirpated the velum palati by means of a ligature. The entire velum of this patient was affected with cancer as far as the pharynx; there was no enlargement of the cervical ganglions. Recollecting the happy results obtained by the ligature in extirpating cancerous tumors, especially by M. Recamier, M. Blandin decided to try it in the present case; he tied all the circumference of the tumor by means of different points of suture; the cancer thus surrounded fell off spontaneously after some days; a small diseased portion still remaining was surrounded by a new ligature, which speedily caused its fall. At present the patient is completely cured, and M. Blandin called the attention of the Academy especially to the regularity with which the remains of the mucous membrane of the palate approximated in consequence of the contraction of the cicatrix, so as to constitute in some sort a new velum.—*London Lancet.*

Treatment in Cases of Burn.—Dr. Wm. Jones, of Lutterworth, has sent to us for publication the following fact:—"About twenty-five years since I was called to a young lady who was dreadfully burnt on the thighs and abdomen. It appeared to us a hopeless case. It immediately struck me that the administration of a very strong opiate afforded the *only shadow* of a chance for the patient. That, therefore, I immediately gave her. A tranquil sleep resulted. When its effects went off I repeated it, and I was quite surprised not only to see how little she suffered, but how kindly the burnt parts cicatrized and healed. I have always since used it with great advantage."—*Ibid.*

Quackery.—One Ira G. Frazer has been held to bail at Troy, in the sum of one thousand dollars, on the charge of improper treatment in the removal of a cancer from the breast of a Mrs. Caldwell, who, according to the verdict of the jury of inquest, came to her death in consequence of his improper treatment.